FIG. 1

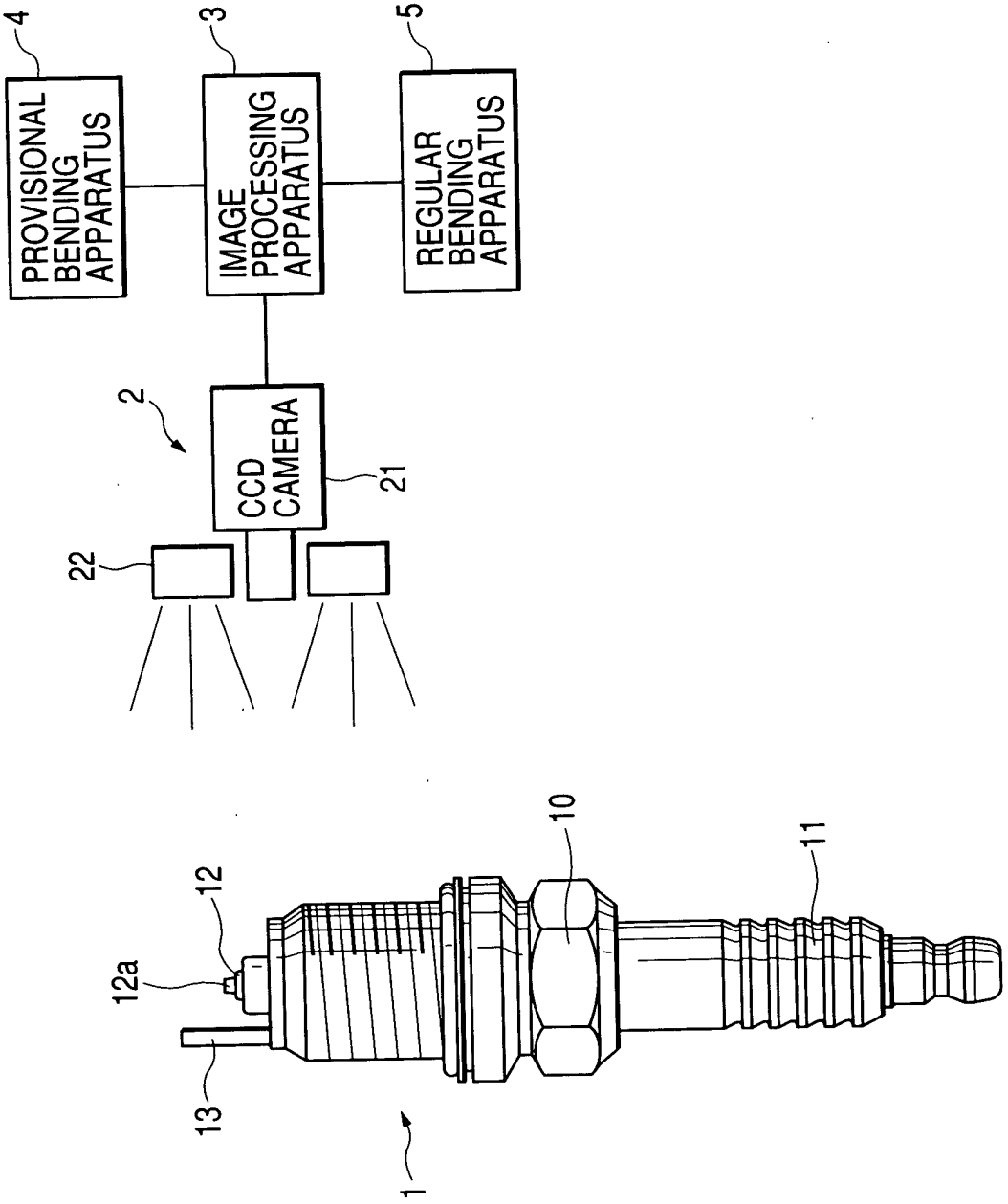

4
PROVISIONAL BENDING APPARATUS
3
IMAGE PROCESSING APPARATUS
5
REGULAR BENDING APPARATUS
2
CCD CAMERA
21
22
10
11
12
12a
13
1

FIG. 2

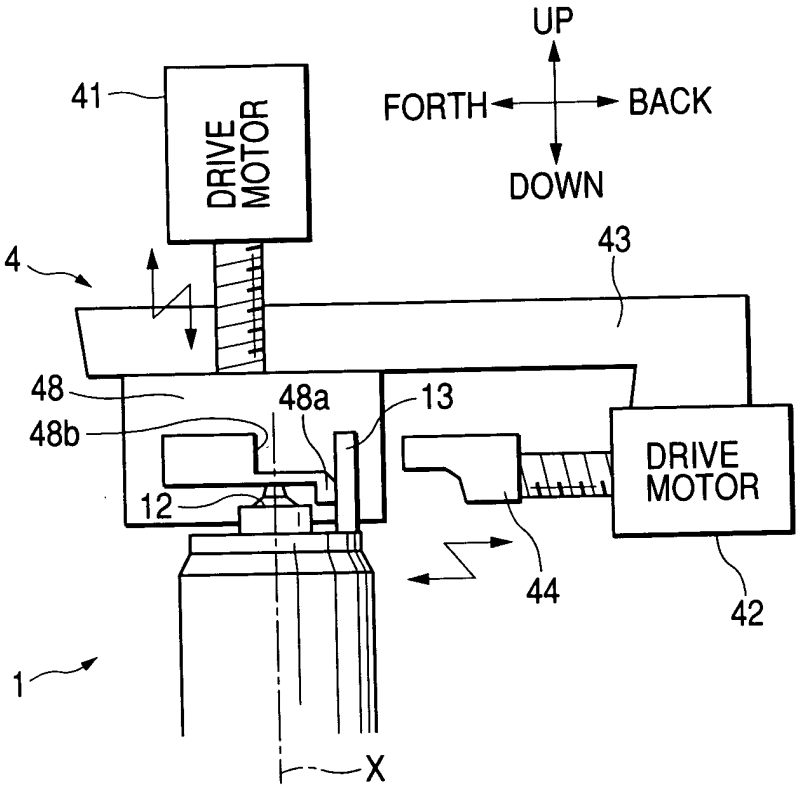

UP
FORTH
BACK
DOWN
41
DRIVE MOTOR
4
43
48
48a
13
48b
12
DRIVE MOTOR
44
42
1
X

FIG. 3

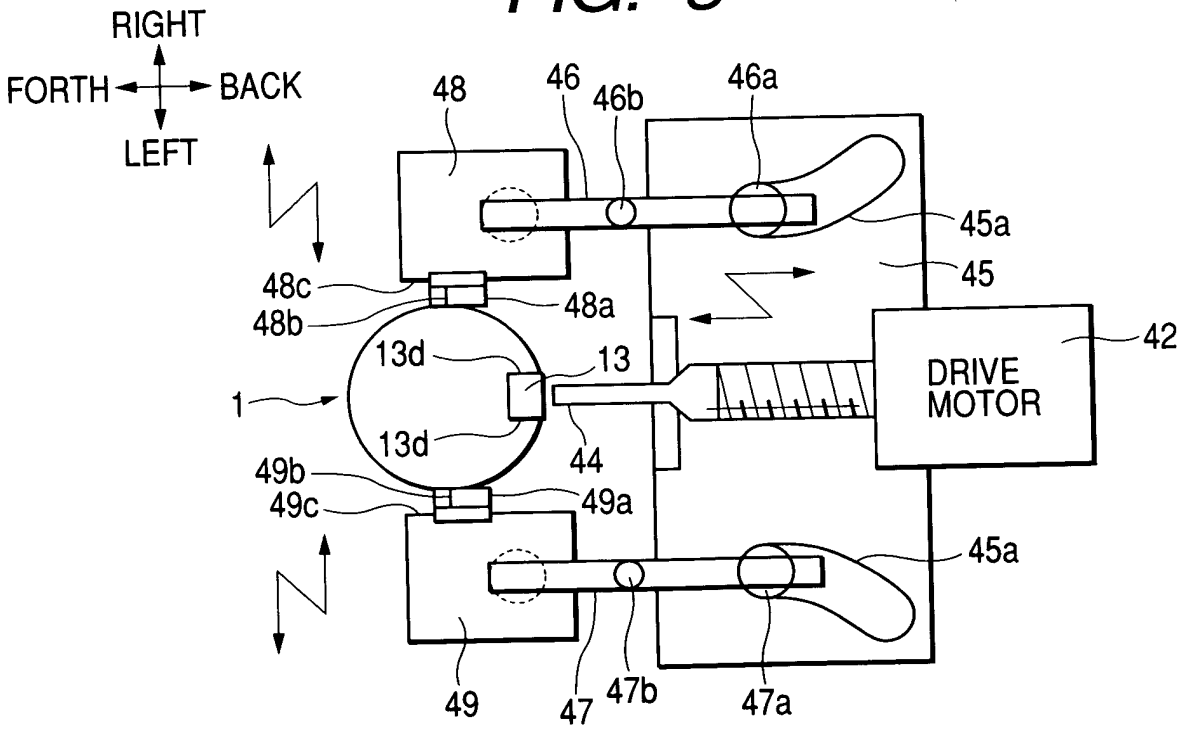

RIGHT
FORTH
BACK
LEFT
48
46
46b
46a
45a
45
48c
48a
48b
13d
13
42
DRIVE MOTOR
1
13d
44
49b
49a
49c
45a
49
47
47b
47a

FIG. 4

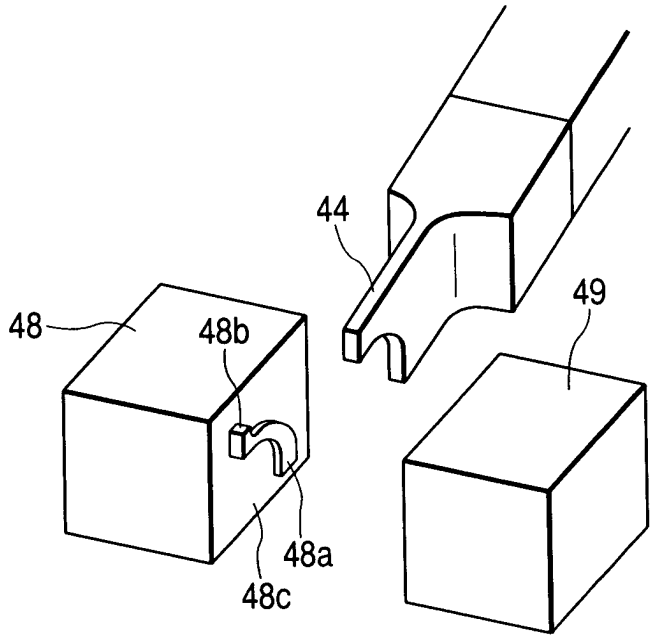

44
49
48
48b
48a
48c

FIG. 5

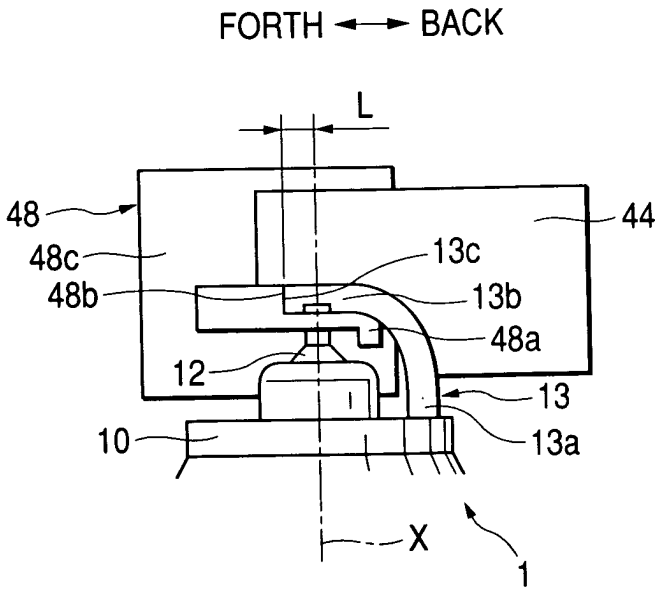

FORTH
BACK
L
48
48c
48b
44
13c
13b
48a
12
13
10
13a
X
1

FIG. 6

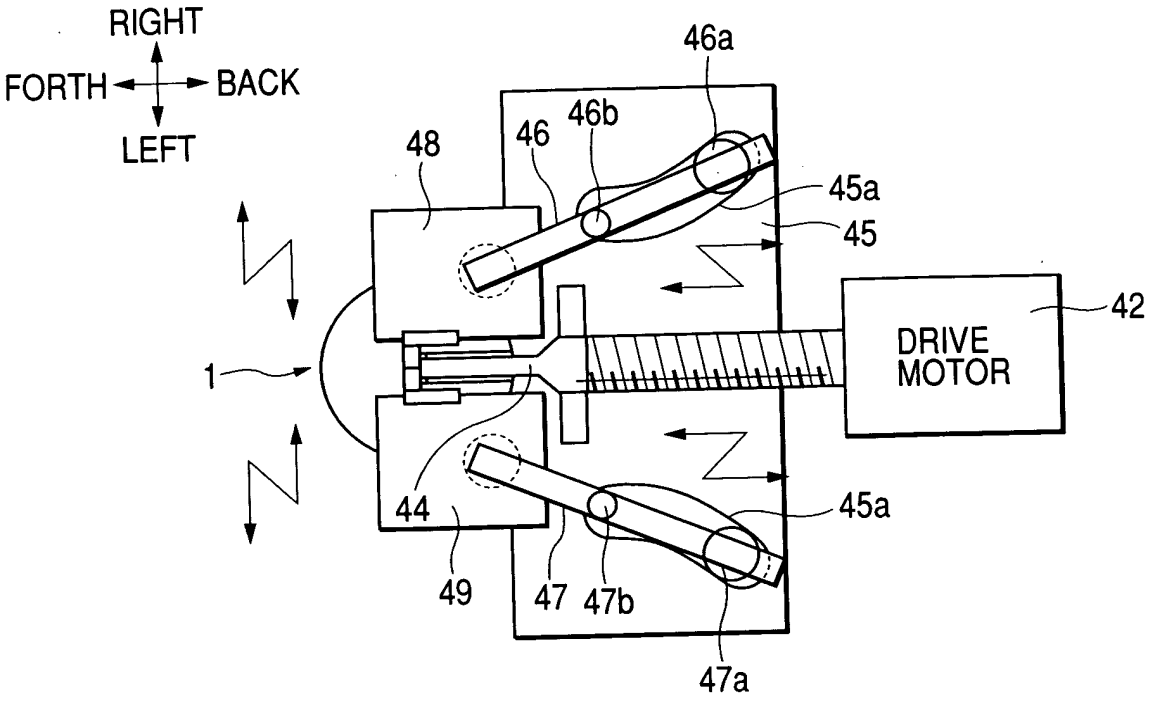

RIGHT
FORTH
BACK
LEFT
46a
46b
46
48
45a
45
42
DRIVE MOTOR
1
44
45a
49
47
47b
47a

FIG. 7

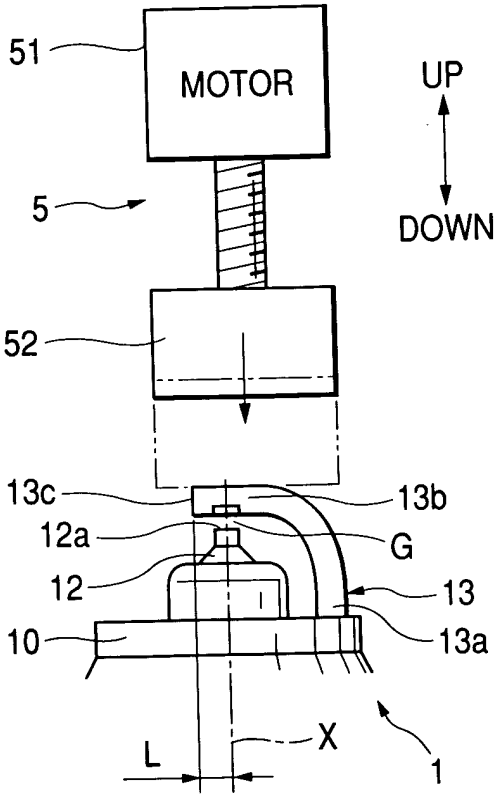
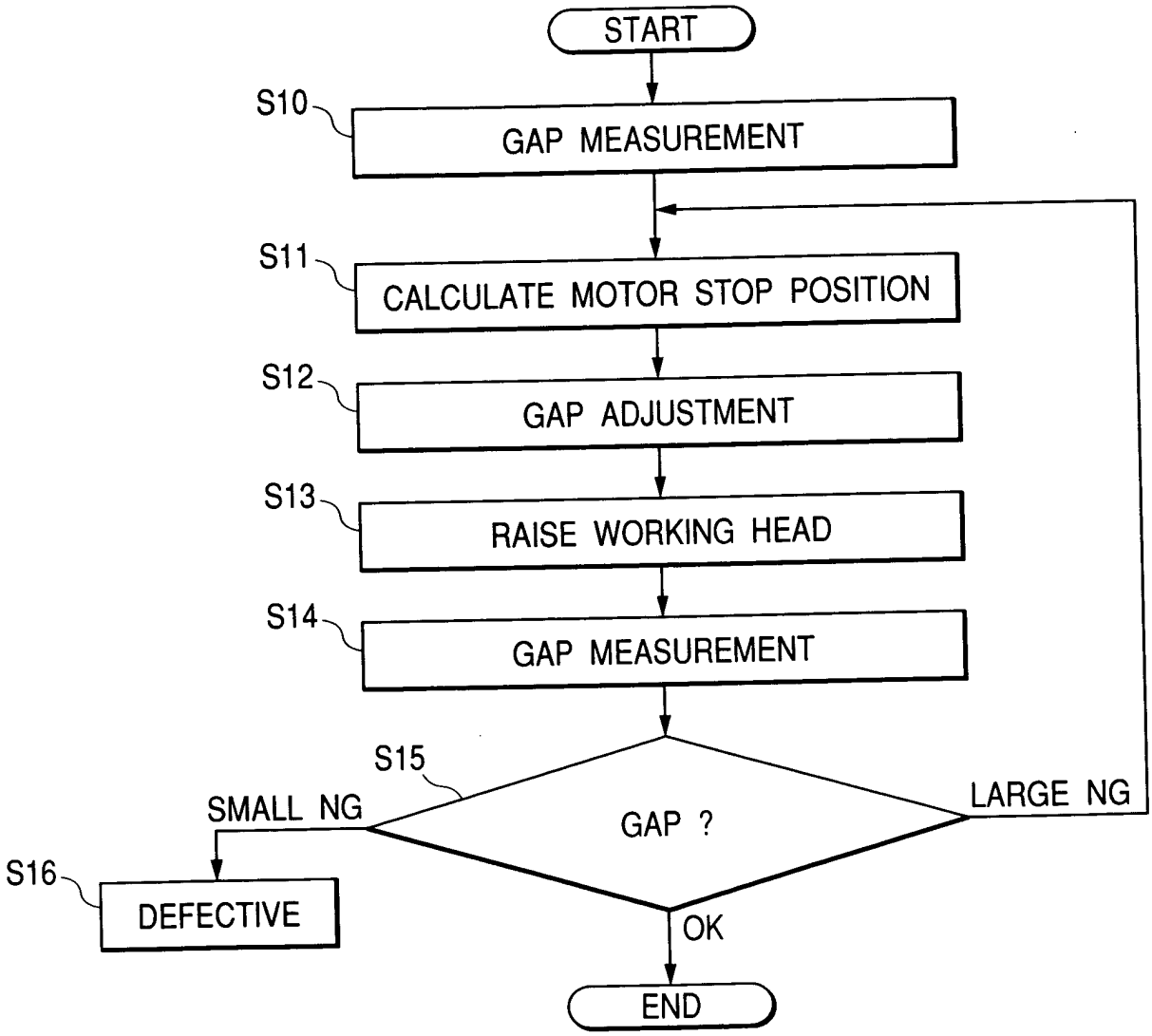

51
MOTOR
UP
DOWN
5
52
13c
13b
12a
G
12
13
10
13a
L
X
1

FIG. 8


START
S10
GAP MEASUREMENT
S11
CALCULATE MOTOR STOP POSITION
S12
GAP ADJUSTMENT
S13
RAISE WORKING HEAD
S14
GAP MEASUREMENT
S15
GAP ?
SMALL NG
LARGE NG
S16
DEFECTIVE
OK
END